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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/074,209	02/12/2002	Charles E. Taylor	112440-727	4379
29190	7590	10/30/2007		
BELL, BOYD & LLOYD LLP			EXAMINER	
P.O. BOX 1135			TRAN, THAO T	
CHICAGO, IL 60690			ART UNIT	PAPER NUMBER
			1794	
			MAIL DATE	DELIVERY MODE
			10/30/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/074,209	Applicant(s) TAYLOR ET AL.	
	Examiner Thao T. Tran	Art Unit 1794	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 August 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 102-126, 154, 158-165, 167-169 and 171-175 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 102-126, 154, 158-165, 167-169 and 171-175 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/7/07</u> . | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This is in response to the Amendments filed on 8/07/2007. The IDS filed on 9/07/2007 have been considered.
2. Claims 102-126, 154, 158-165, 167-169, and 171-175 are currently pending in this application. Claims 102, 113-115, 125, 154, 158, 167-169, and 171-175 have been amended.

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 102-126, 154, 158-165, 167-169, and 171-175 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

At least independent claims 102, 154, 169, and 171 contain at least the limitation, "third electrode .... downstream from the second electrode", that have no proper support in the specification as originally presented. It is noted that in the specification, the third electrode is upstream from the first electrode while the trailing electrode is downstream from the second electrode (see abstract).

At least claims 105-106 recite the third electrode to collect and neutralize the charged particles in the air, which contradict claim 1, which recites the third electrode to generate ions.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 102-109, 113-114, 117, 119-126, 154, 158-162, 164-165, 169, 171-175 are rejected under 35 U.S.C. 102(b) as being anticipated by Moon (US Pat. 5,215,558).

Moon teaches an electrical dust collector which includes an ion generator; the ion generator comprising a first array of electrodes 1; a second array of electrodes 2; the first and second electrodes are ion emitter and ion collectors respectively; an array of auxiliary electrodes 4 between the first and second arrays; an array of accelerating electrodes 3 interposed between the second electrodes and partially downstream from the second electrodes. Figure 3(b) illustrates the accelerating electrode 22 having sharp teeth 23 that act as an ionizing unit (see paragraph bridging col. 1 & 2). Thus, the accelerating electrode of Moon meets the requirement of the claimed third electrode.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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8. Claims 109-112, 116, 118, 163, and 168 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moon as applied above.

Moon does not teach the claimed shapes of the third electrodes. However, it would have been obvious to one of ordinary skill in the art that configuration of an electrode would have been designed for the purpose of obtaining desired results such as improved gas flow patterns and properties with efficient corona current densities and high potential field, while preventing particle erosion of the electrode surface.

#### ***Response to Arguments***

9. Applicant's arguments, filed on 8/07/2007, with respect to the 112 rejection(s) of the claims have been fully considered and are persuasive.

Applicants refer the downstream electrode in Figures 4A and 4B as the third electrode. However, this contradicts the instant invention as originally presented in the specification. As clearly defined in the abstract, the third electrode is upstream from the first electrode while the trailing electrode is downstream from the second electrode. It is suggested that Applicants keep the claim language consistent with that in the specification.

#### ***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao T. Tran whose telephone number is 571-272-1080. The examiner can normally be reached on Monday-Friday, from 9:00 a.m. - 5:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton I. Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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A handwritten signature in black ink, appearing to read "Thao Tran". The signature is fluid and cursive, with the first name "Thao" and last name "Tran" clearly distinguishable.

Thao T. Tran  
Primary Examiner  
Art Unit 1794

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